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# U.S. Marine Corps Biometrics Pilot

**26 January 2011**

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# Purpose

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- To lean forward in providing a tactical biometric capability that supports Marines in Afghanistan and future MAGTF Operations



# UNCLASSIFIED Situation

## Current USMC Biometrics

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- Current biometric devices used (BAT/HIIDE) do not meet requirements for a tactical collection device
- Multiple UUNS/JUONS have been submitted over several years requesting an advanced device
- JUONS requiring solution to BAT replication and data latency issues.



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# Situation

## Senior Leadership

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- J-8 Directed BIMA to develop solution to address these issues using existing technology/capabilities, and demonstrate for fielding approval.
- A Joint Analysis of Alternatives concluded the SEEK is the best current device to meet requirements.
- BIMA/PP&O proposed pilot program was briefed to MARCENT.
- COMUSMARCENT directs G-3 to go forward with program.
  - LtGen Dunford – “This is the most promising development on biometrics in a long time”



# USMC/BIMA Methodology

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- Leverage currently fielded COTS/GOTS solutions to deliver the required tactical biometric capability and responsive architecture **now**
    - Work within DoD to leverage existing efforts (SOCOM, NCIS, Navy, NGIC, PM, etc.)
  - Field a solution that will meet the majority of UUNS/JUONS requirements now while developing the long term solution.
    - 80% solution now is better than zero now
    - Don't sacrifice the entire capability awaiting the full capability
    - Support both battlefield and national security biometric efforts
  - Field a solution and enhanced architecture that allows information to be ingested in BAT, expands searchable records, provides feedback to the end user, and simultaneously reduces match time against DoD and interagency databases to support both battlefield and national security goals.
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# USMC UUNS

## Required Modalities that meet standards ☒

- Verifying the identity of individuals by a iris scan or finger print capture with a 99% accuracy. ☒
- Quick results from loaded watch list for screened persons. A 2-3 sec response time is ideal. ☒
- **Storing 2 million or greater skeleton records in the device (at 158 KB/record) \***
- **USB port, data cable port, or other common connection to BAT. \***
- Generate a time stamped tracking report using GPS integrated with BATs. ☒
- Power save function. 6 to 8 hour battery life with extra rechargeable batteries. ☒
- Able to endure the harsh field conditions in Afghanistan. ☒
- Iris scanning in various light conditions from very bright outdoor sun light to dark indoor light. ☒
- Touch screen visible in sun light with a back light for night operations/QWERT Keyboard. ☒
- **Multiple USB ports able to access external media at least 3. ☒**
- Must not exceed 5 pounds with 2 extra batteries ☒
- Auto Power off setting / Zeroize function for user. ☒
- Battery power w/ rechargeable by 110V - 220V AC, 24V DC vehicle power & Solar ☒
- Device must be able to internally recharge batteries ☒

**\* Two million records at 158KB each would require a 302GB Hard drive. Tier 1, 2, and 4 of the watchlist is approximately 20,500 records.**

**\* Cannot transmit directly to BAT due to classification issues as well as BATs proprietary algorithms and lack of adherence to DoD Standards.**





# SEEK II

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- **Man-Portable, Multimodal Identification and Enrollment platform.**
  - **Collects and formats Standards based type 4 (Rolls) and 14 (Flats) Finger, Face and Iris EBTS records**
  - **Windows XP platform,**
  - **4.1 in Sunlight viewable touch screen**
  - **FBI “Appendix F” spec rolled fingerprints**
  - **Dual Iris auto-capture in bright sun**
  - **Shares MOBS software with Guardian Jump Kit**
  - **Built in 40,000 person watch list easily edited/updated in field**
  - **Rapid ID checkpoint with Finger or Iris against watch list**
  - **MIL spec 810 F, IP 65 rated**
  - **2 USB, Ethernet, Wireless 802.11 and Bluetooth**
  - **(Last Tactical Mile ready as 3G/4G comms deployed)**
  - **32GB solid state memory (212k skeleton records as described by the UUNS. 40k watchlist)**
  - **EBTS Standards compliant**
  - **3.3 lbs**
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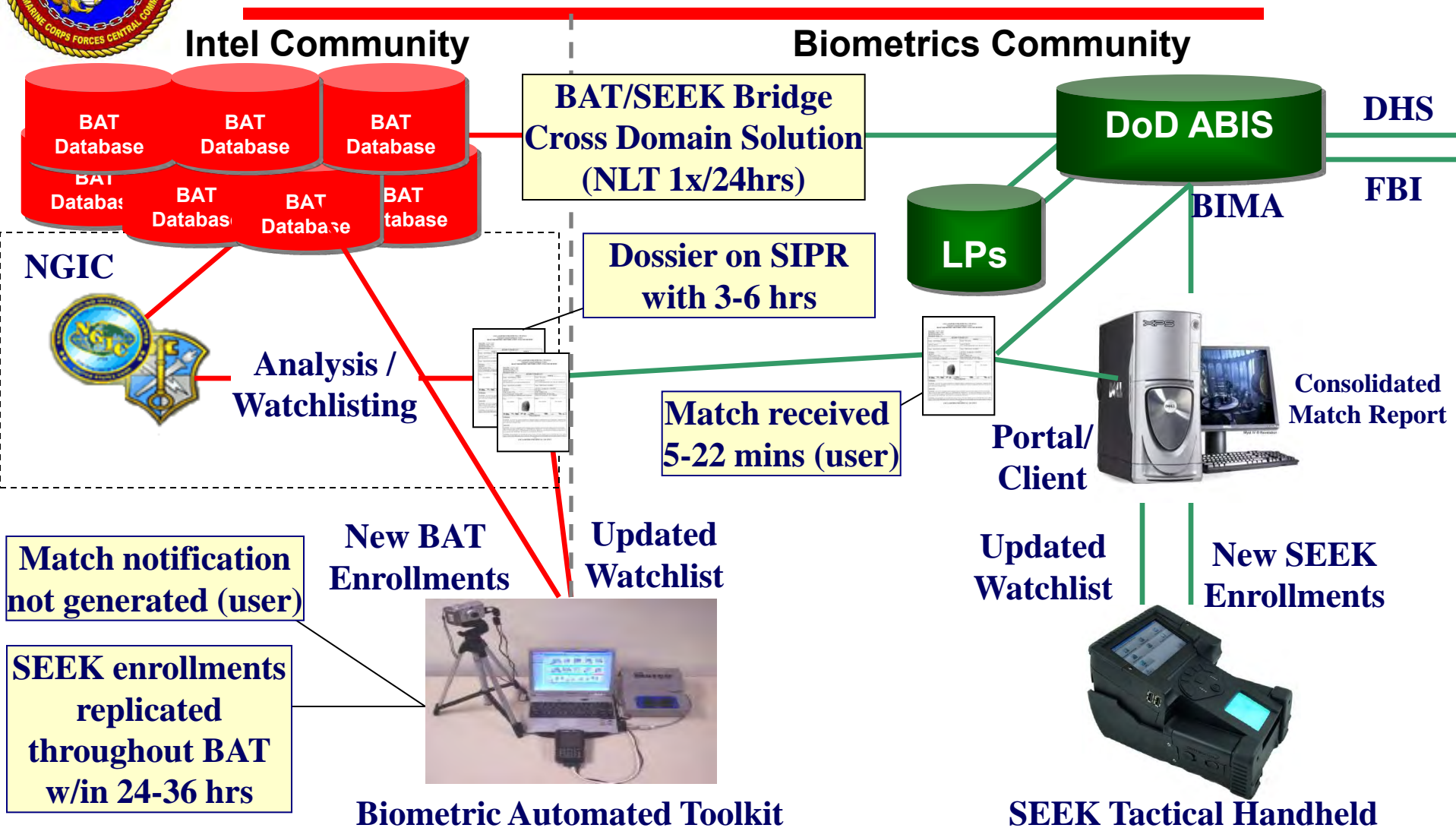
# Biometrics Portal

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- Open architecture will allow for notification of match/no-match to Intel, Targeting, NGIC, BIMA, FBI, DHS and end-user within 5-22 mins using existing networks (NIPR and/or satellite).
- Avoids BAT databases replication issue by submitting direct to ABIS from portal/client, resulting in a faster match and initiates NGIC intelligence reporting process within 22 minutes.
- Supports interagency data-sharing and broader national security objectives
- Architecture will allow for auditing of records to ensure successful submission.
- Provides a confirmation of match/no-match to ensure records received in ABIS.
- Eliminates potential for records to be lost during data replication.
- Architecture can support any future biometric device that conforms to standards.
- Information collected will be ingested into BAT via software bridge.
- Supports MCCDC's Identity Dominance System Program of Record Concept of Employment for a "family of handhelds", clients, and servers



# Added Capability





# BAT/SEEK Bridge

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- Capacity of ingesting 1,400 records into BAT per day (new encounters/tactical enrollments only).
  - Once ingested into BAT, same replication times apply as a direct BAT submission.
  - Mass enrollment operations would still utilize the BAT and not create an additional strain on the bridge.
  - Current capability could support 42,000 new enrollments per month
  - Estimated only 2250-3000 SOCOM enrollments per month
- Enrollments to be collected by the SEEK and ingested through the bridge are enrollments we are not receiving and sharing now.
  - ***Marines are not sufficiently enrolling individuals on patrol due to the lack of a tactical enrollment device that meets standards.***
  - ***Currently, every encounter is a missed opportunity for enrollment.***

**“The Databridge 1.0 was found to provide an acceptable confidence of meeting operational needs for ingestion of Combined Security Transition Command - Afghanistan (CSTC-A) and Secure Electronic Enrollment Kit (SEEK) files.”**

**- PM DoD Biometrics Databridge Report March 2010**



# Watch List

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- BIMA-WV is currently generating a Biometrically-enabled Watch List (BEWL) for the SEEK devices for SOCOM.
    - Signed IDS CDD contains the requirement for BIMA to provide the same service to the DoN.
  - Currently Tier 1 & 2 only – updated every two weeks (~ 500 records).
    - Marine Corps would require Tiers 1, 2 & 4 updated weekly (~20,500 records).
      - BIMA will support this requirement.
  - Watch list nominations originate in Afghanistan and are maintained by NGIC
    - NGIC forwards the watch list to BIMA-WV for flagging in ABIS.
    - ABIS records are parsed to generate SEEK templates and posted on a BIMA server for updates to devices.
    - Watch list in ABIS is the same as in BAT
  - SEEK files submitted through the portal will always check against the latest DoD and FBI watch lists.
  - Watch list currency will be equal to that of HIIDE
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# Implementation

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- USMC will get 10 SEEK II devices.
  - CENTCOM / II MEF's involvement in Pilot Program does not constitute the USMC's preferred replacement for the HIIDE. DOD Army biometrics PM will go through normal procurement process in FY11.to replace HIIDE.
- Portal software
  - GOTS software provided at no cost by SOCOM
  - BISA Architecture and satellites provided by BIMA (including 1yr bandwidth)
  - SEEK and VSAT provided by USMC
- Server to run web-based portal – can be installed and operated anywhere
  - Requires operational support
- As with any system, training will be required.
  - Mobile training teams provided by SOCOM, train-the-trainer
  - NCIS training support at Camp Leatherneck
  - Existing Biometric System Administrators (BSA)\*\*
- Identify personnel to upload files and perform watch list maintenance
  - Leverage BSAs currently updating Pier, HIIDE watch lists.





# Advantages

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- Provides Marines the tactical handheld they've required for years - **now**.
  - Eliminates classification issues of plugging UNCLAS handhelds into BAT
  - Follows established DoD Directives, guidance, and standards
  - Allows matches against watchlists, DoD, FBI, and DHS biometric databases
  - Information collected will be ingested into BAT for analysis/matching.
  - Open architecture will allow for notification of match/no-match to Intel Community (IC) and user within 5-22 mins using existing networks (NIPR).
    - Current architecture latency issues result in delayed notification to IC
    - Architecture will allow for auditing of records to ensure submission
    - Avoids current BAT replication issues resulting in lost records
  - Architecture can support **any** future biometric device that conforms to standards
  - Supports senior leadership guidance to maximize the use of current capabilities and reduce the impact of legacy systems shortcomings
  - Supports senior leadership direction to increase biometric enrollments in Afghanistan
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# Current Status of Pilot

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- Oct 2010- A Co. 1/8 Marines took custody of (10) SEEK II Handhelds
  - Immediate need for FSR/FSA to support equipment, ingest into portal, watchlist downloads, software issues\*\*\*
    - Limited FSA/FSR knowledge of SEEK system
  - Once up and running approx 40 enrollments submitted during first operation with a few Tier hits.
    - As of o/a 15Jan11- 460 enrollments through SOCOM Portal
  - Capabilities of handheld for outside the wire transmission has been limited.
    - Currently shipping BGAN for use of downloading outside FOB to evaluate capability to transmit and confirm within 5-22 min.
  - 30 day assessment-Issues with training, FSR support, BAT Bridge\*\*
  - Awaiting MCOTEA official assessment
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# Current Status of Pilot

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- 3/2 to replace 1/8. Moving forward with training during predeployment training, Soldier as an FSE course attendance, SEEK equipment to use prior to deploying
    - Unit gain confidence in gear and integrate into modus operandi-
  - As of Dec10, PP&O (POE) Expeditionary Branch requested support for MEUs deploying and in need of a tactical biometrics device
    - Specifically requested SEEK device
  - PPO IdOps agreed to support MEUs/SOTGs with SEEK devices in order to evaluate tactical capabilities/limitations across expeditionary mission
    - Use during VBSS missions, other MEU missions-will help support USMC IdOps Strategy 2020 assumptions/capabilities/limitations
  - MEUs to request MCOTEA official evaluation of SEEK devices ISO missions.
    - Formal, impartial evaluation by MCCLL
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# Take Aways

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- Continue to evaluate the pilot-its capabilities and limitations and help mold/advocate the current and future need for tactical biometrics ISO Marine Corps expeditionary missions
- Field user evaluation will be conducted to identify areas for potential enhancement in future phases.
- Does it answer the question/satisfy most of the current Marine Corps UUNS requirements

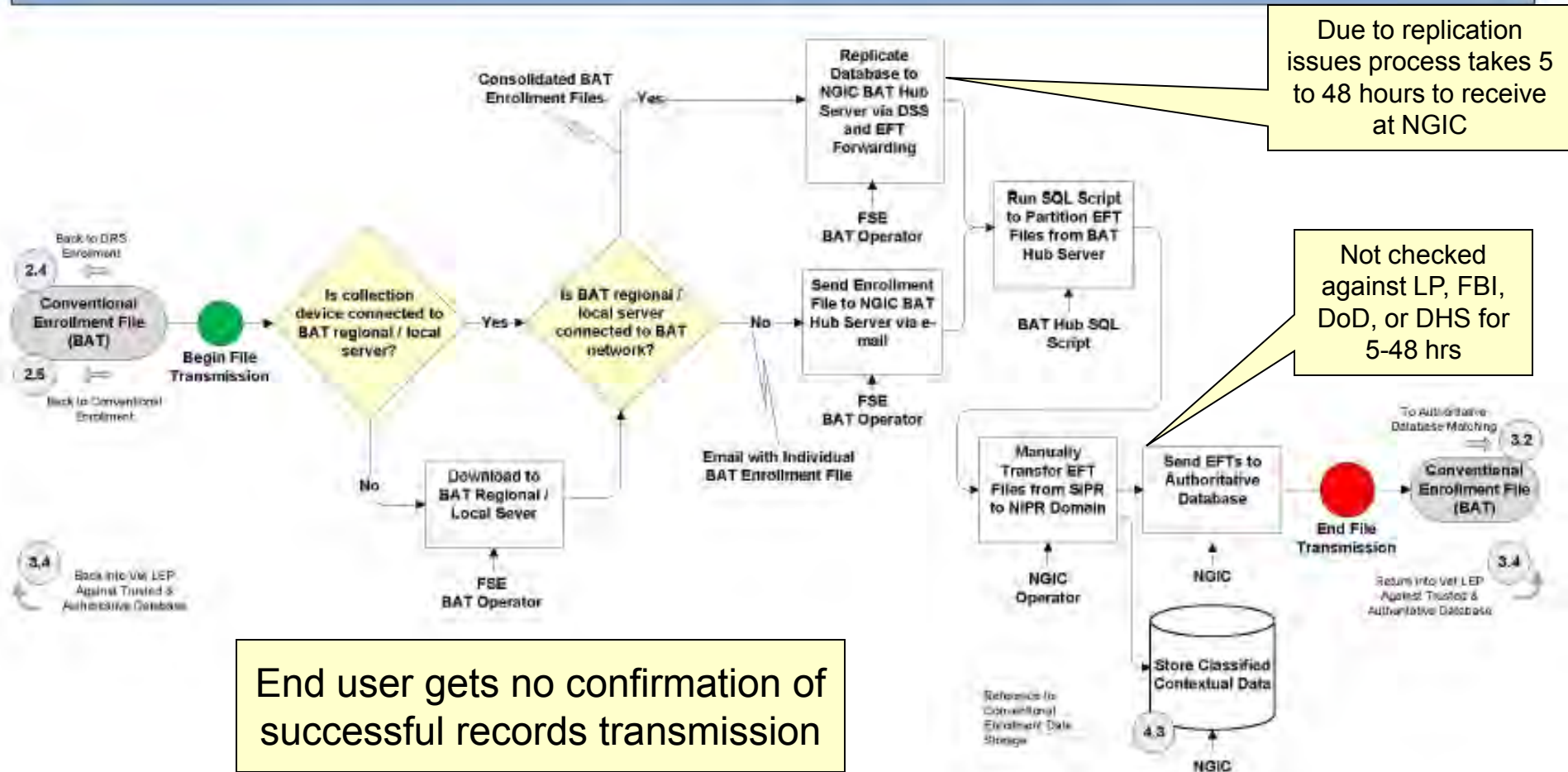
**“Without this lightweight, fully capable biometric device, insurgents of interest could continue to move freely throughout MEB-A’s battle space and increase the likelihood that they can continuously engage our forces causing death and injury and disrupt our mission.”**

**- MEB-A UUNS 09265UA**

**Questions?**



## 5.1 Transfer Conventional Enrollment (BAT) Files to Authoritative Databases

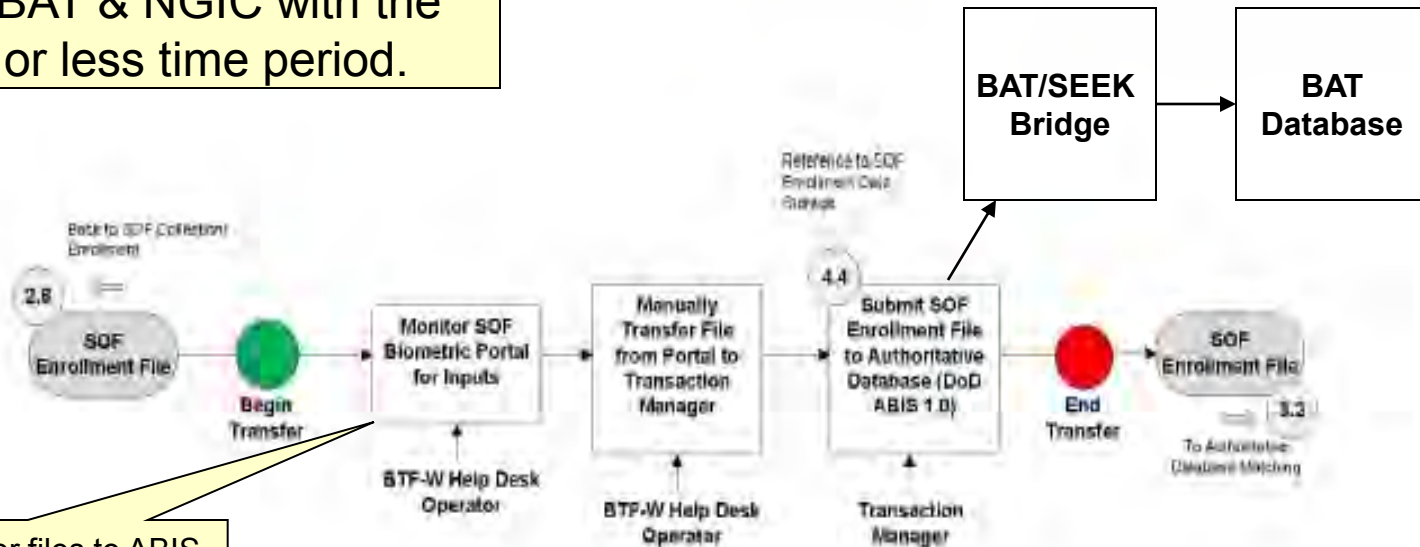






## 5.2 Transfer SOF Enrollment File to Authoritative Database

New bridge allows biometrics to make it to BAT & NGIC with the same 24 or less time period.



User can transfer files to ABIS from ANY SIPR or NIPR network via web portal.

From Portal upload, the process to match at ABIS and return results to end user and NGIC is 22 mins



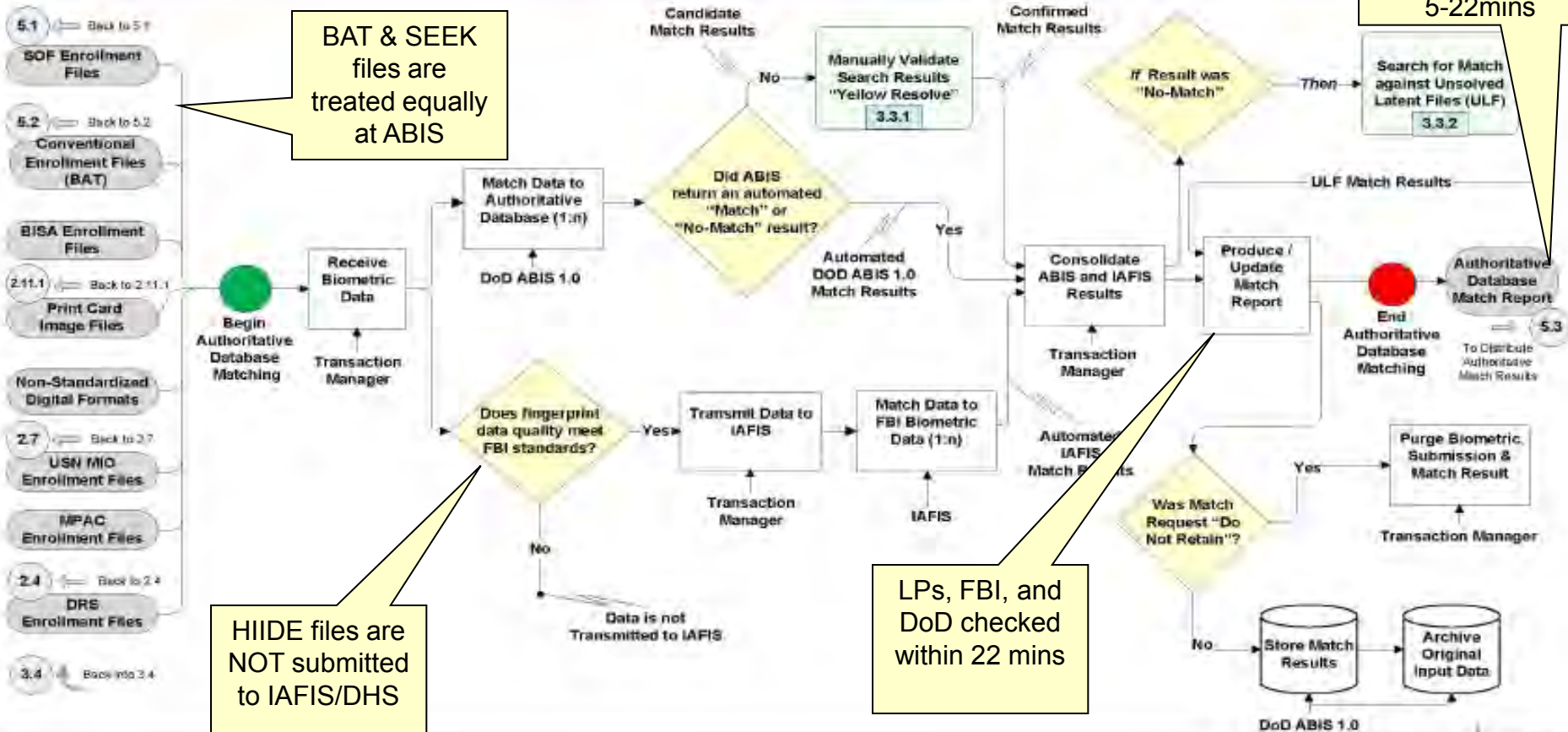
### 3.2 Search for Match in Authoritative Databases (1:n)

NGIC/User Gets  
Match report in  
5-22mins

BAT & SEEK  
files are  
treated equally  
at ABIS

HIIDE files are  
NOT submitted  
to IAFIS/DHS

LPs, FBI, and  
DoD checked  
within 22 mins



Portal allows auditing, tracking and status review of submitted records





## 6.1 NGIC Draft BIAR Preparation

